



## DESCRIPTION

The PT6910A is a continuous mode inductive step-down converter, designed for driving single or multiple series white LEDs efficiently from a voltage source higher than the output LED voltage. The IC operates from an input supply between 5V and 24V and provides an externally adjustable output current of up to 0.7Amp.

The PT6910A includes the internal switch and a high-side output current sensing circuit, which uses an external resistor to set the nominal average output current. Also the output current can be adjusted below the set value by using the external ADJ pin. The ADJ pin can also accept a PWM signal for PWM dimming. If you apply a voltage of 0.2V or lower to the ADJ pin, the output switch will be turned-off.

The PT6910A integrated soft thermal shutdown function, when the internal junction temperature rise above 135°C, the output current will decrease with the temperature rise, when the temperature rise up to 150°C, the output current decreases to zero.

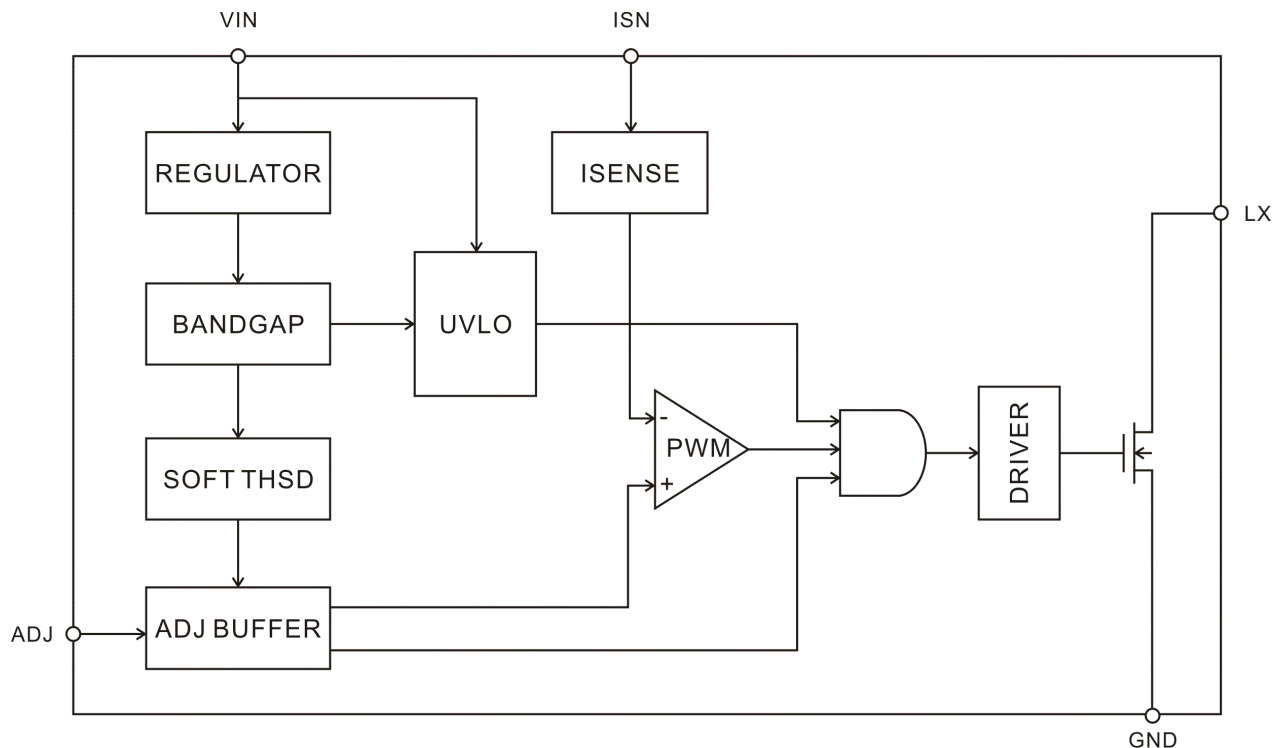
## FEATURES

- High Efficiency (up to 95%)
- Programmable Soft-Start Time
- Soft Thermal Shutdown
- Maximum 0.7A Output Current
- PWM/Analog Dimming
- Analog Dimming Range (15% to 100%)
- 10uS Minimum PWM Dimming on time(1% at 1kHz)
- Wide Input Voltage: 5V ~ 24V
- Internal Open-Circuit LED Protection
- Typical  $\pm 3\%$  Output Current Accuracy
- SOT-89-5L

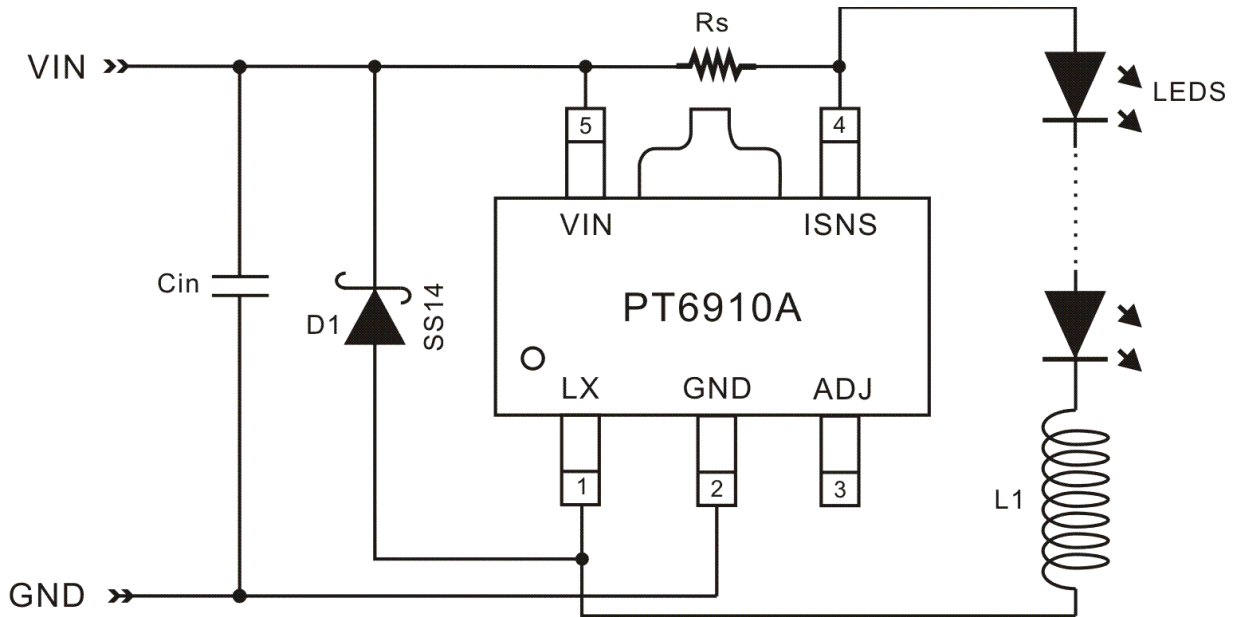
## APPLICATIONS

- DC/DC LED Driver
- Low Voltage Industrial LED Lighting
- Low Voltage Halogen Replacement LEDs
- Decorative LED Lighting
- LED Table Lighting

## BLOCK DIAGRAM



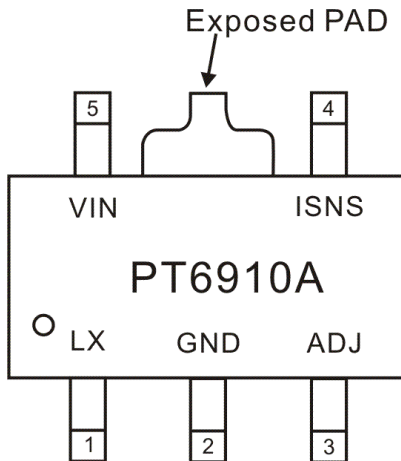
## TYPICAL APPLICATION



## ORDER INFORMATION

| Valid Part Number | Package Type | Top Code |
|-------------------|--------------|----------|
| PT6910A           | SOT-89-5L    | PT6910A  |

## PIN CONFIGURATION



## PIN DESCRIPTION

| Pin Names   | Description   | Pin No. |
|-------------|---|---------|
| LX          | Drain of The Internal NMOS Switch.  | 1       |
| GND         | Signal Ground.  | 2       |
| ADJ         | Multi-function ON/OFF and brightness control pin.<br>Leave floating for normal operation.<br>Drive to voltage below 0.2V to turn off output current.<br>Analog dimming input.<br>PWM dimming input.<br>Connect a capacitor from this pin to ground if soft-start is needed. | 3       |
| ISNS        | Output current sense pin  | 4       |
| VIN         | Input supply pin.   | 5       |
| Exposed PAD | Power ground  |         |